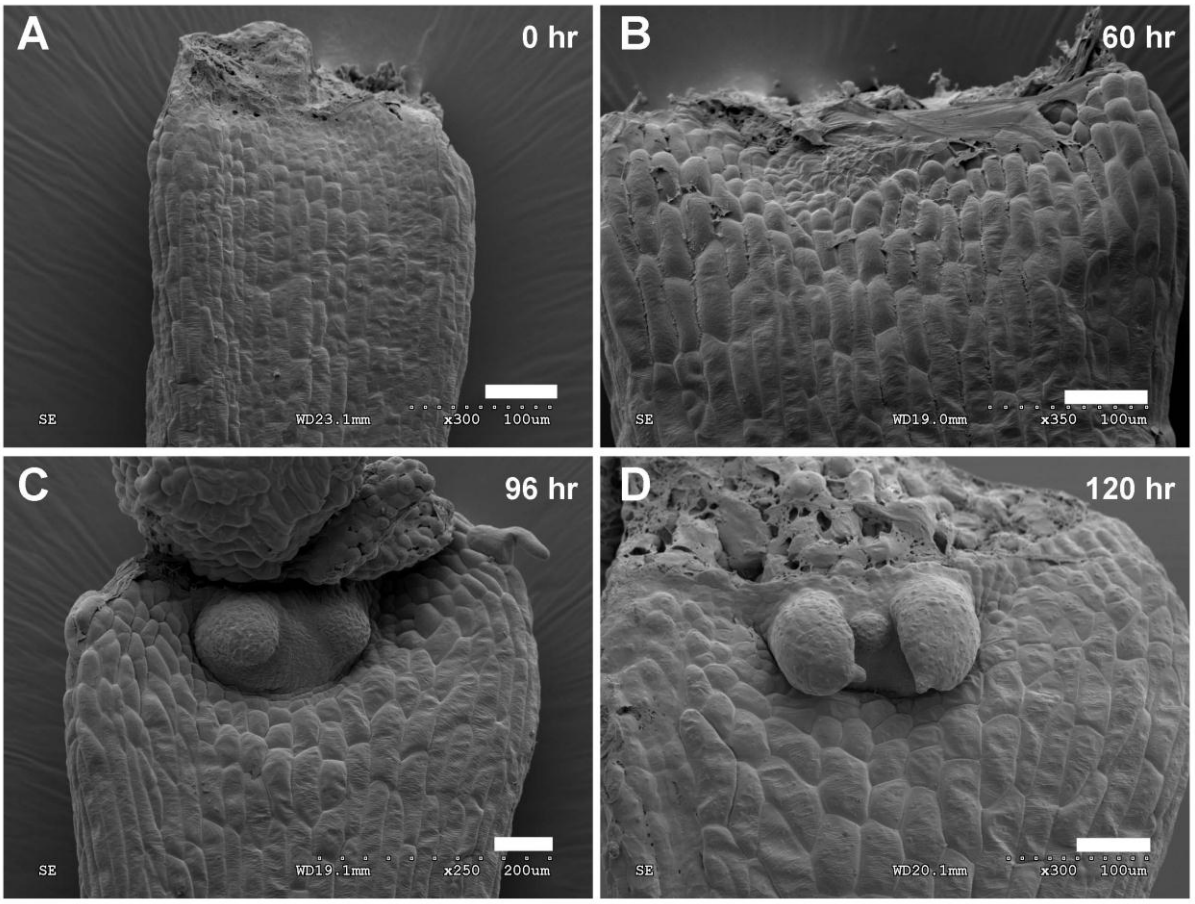
SUPPLEMENTAL FIGURES

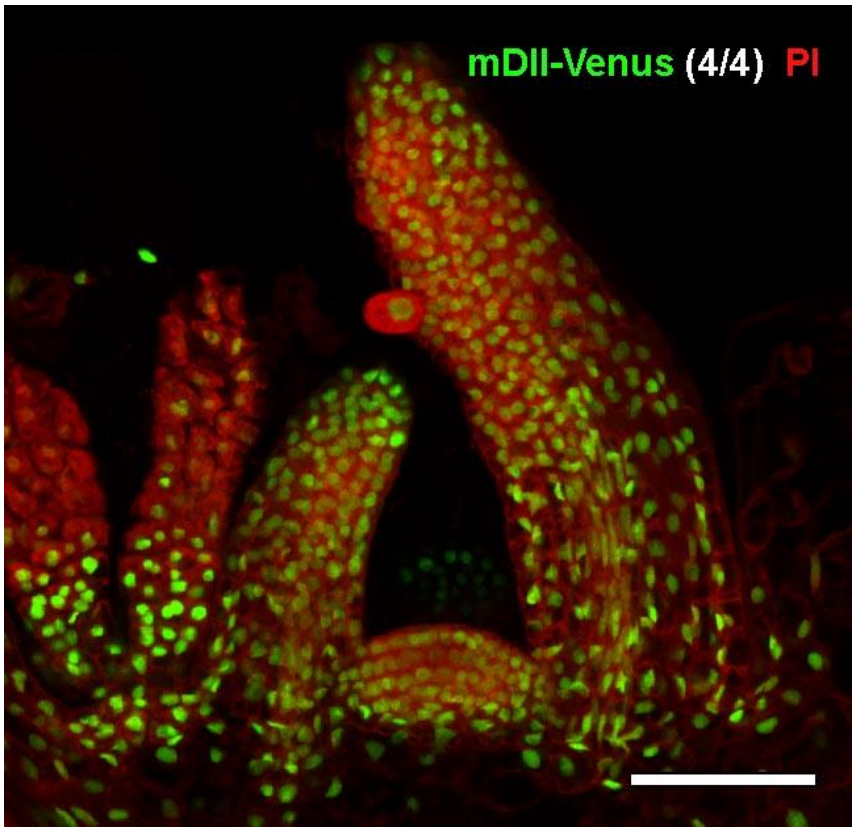
Supplemental Figure 1. AM Initiation in Cultured Leaf Base.

Scanning election micrograph of rosette leaf axil of P_{10} from Col-0 wild-type plants after isolation from intact plants (A), and 60 hr (B), 96 hr (C), or 120 hr in MS media containing no exogenous hormone. Bars = 50 μm.



Supplemental Figure 2. Expression of mDII-Venus in the Vegetative Shoot Apex and Leaf Primordia.

Longitudinal section through meristem and leaf primordia region. Bar = 50 µm.

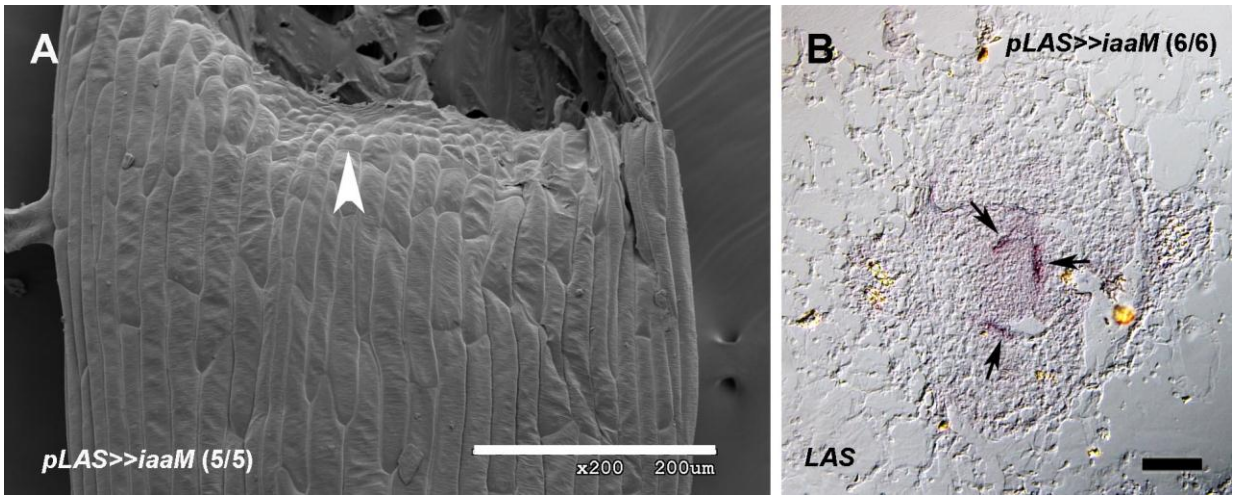


Supplemental Figure 3. Phenotype Characterization and *LAS* Expression in pLAS>>iaaM Plants.

(A) Scanning electron micrograph of rosette leaf axil in *pLAS>>iaaM* with bare axil (arrowhead), which is similar to *pCUC2>>iaaM* (Figure 2C).

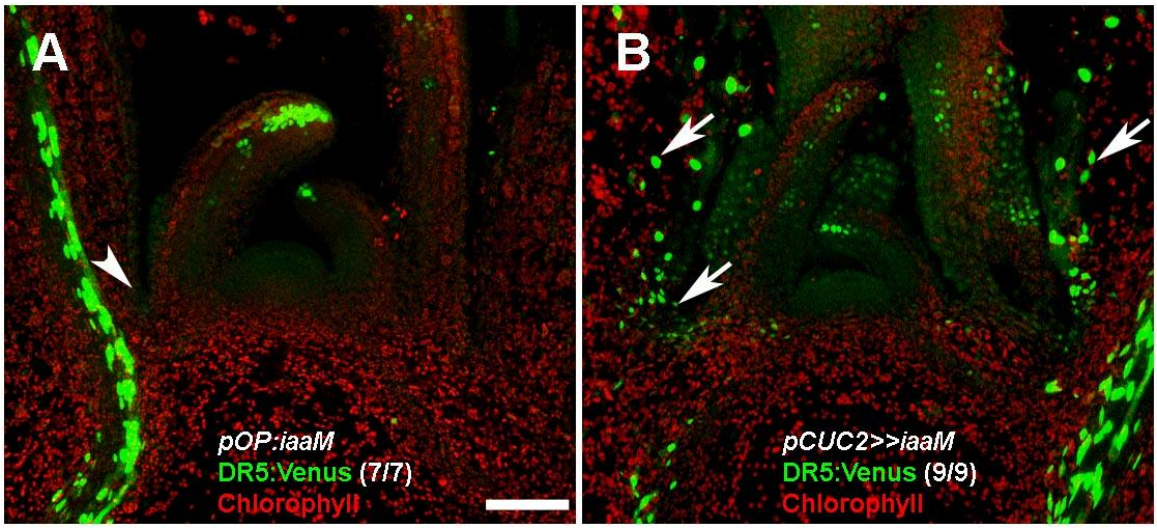
(B) Patterns of *LAS* transcript accumulation in transverse sections through vegetative shoot apex of a 28-day-old *pLAS>>iaaM* plant. *LAS* accumulation in *pLAS>>iaaM* is similar to *pCUC2>>iaaM* and wild-type like *pOp:iaaM* (Figure 2J and 2K).

Bars = 200 μm in (A), 50 μm in (B).



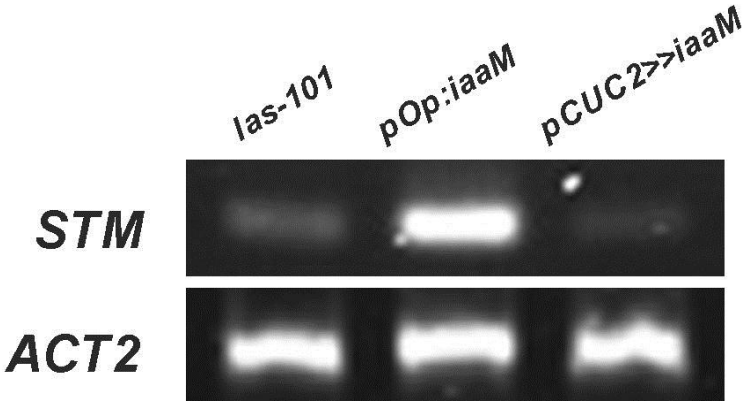
Supplemental Figure 4. Distribution of Auxin Response in the Leaf Axil.

DR5:Venus-N7 (green) in longitudinal sections of vegetative SAMs of *pOp:iaaM* (A) lack of leaf axil Venus signals (arrow head), and *pCUC2>>iaaM* (B) with leaf axil Venus signals (arrow head). Autofluorescence is shown in red. Bars = 50 µm.



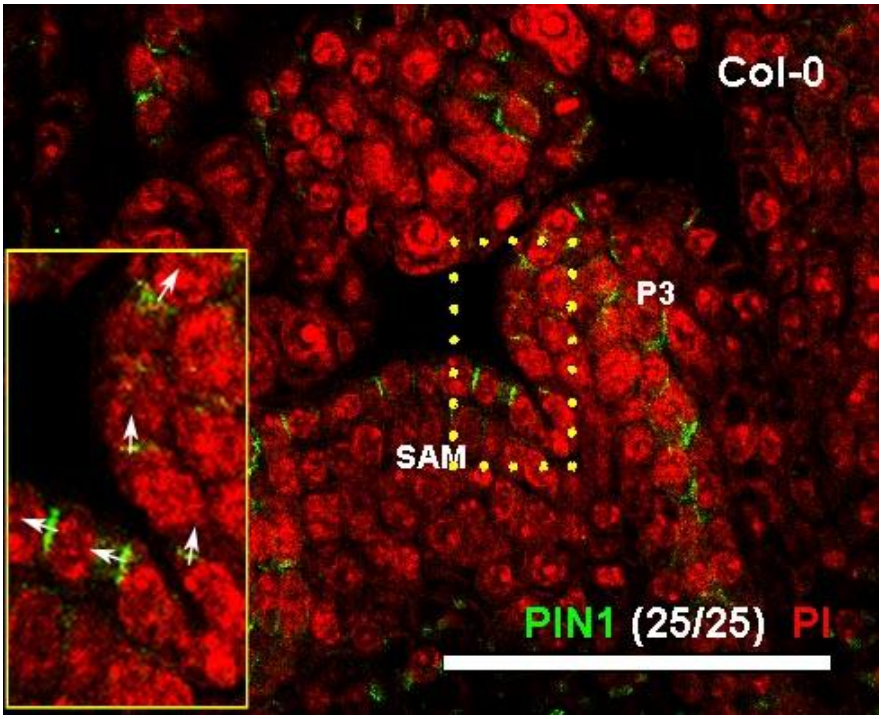
Supplemental Figure 5. Expression of *STM* in *pCUC2>>iaaM* Plants.

RT-PCR analysis of *STM* in *las-101*, in wild-type-like *pOp:iaaM*, and in *pCUC2>>iaaM* (i.e. *pCUC2:LhG4 pOp:iaaM*) 25-day-old shoot tissues without mature leaf blades. Primers used for RT-PCR are listed in Supplemental Table S2.



Supplemental Figure 6. Leaf Axil PIN1 Localization.

Immunolocalization of PIN1 (green) showed polarization away from a leaf axil toward the tip of the primordium as well as the center of the meristem in a longitudinal section of a vegetative SAM of a wild-type Col-0 plant stained with PI (red). The Region in the yellow dotted line box is enlarged to highlight polar localization of PIN1 in each cell. Bar = 100 μm.



SUPPLEMENTAL TABLES

Supplemental Table 1. Number of AMs from Leaf Culture Using AM and Lateral Root (LR) Defective Mutants.

	Col-0	L*er*	*alf4-1* (LR)	*cuc2-3 cuc3-105* (AM)	*rax1-3 rax2-1 rax3-1* (AM)	*rev-6* (AM)
Number of leaves	41	27	48	36	32	40
Leaves w/ AM	24	17	30	11	13	1
Ratio of AM formation	59%	63%	62%	31%	41%	3%

Supplemental Table 2. Primers Used to Make Constructs and for RT-PCR.

Primer	Sequence (5'-3')
iaaM-F	AActgcagATGTCAGCTTCACCTCTCCT
iaaM-R	CCggtaccCTAATTTCTAGTGCGGTAGTTA
pLAS-F	CAGacgcgtGATATTTGTTTTGCCACCTAATGAAGTGTAC
pLAS-R	CGGggtaccGAGATGAAGTTGGACCGACCAAGCAATTG
IPT8-F	ATCggtaccATGCAAAATCTTACGTCCACATTCGTCTC
IPT8-R	AGCtctagaTCACACTTTGTCTTTCACCAAGAAGCGTT
STM-F	GGCCTTACCCTTCGGAGCAA
STM-R	GGTGAGGATGTGTTGCGTCCATT
ACT2-F	GTCGTACAACCGGTATTGTGC
ACT2-R	CACAAACGAGGGCTGGAACAAG